

## PATENT COOPERATION TREATY

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From the INTERNATIONAL SEARCHING AUTHORITY

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APR 22 1999 PCT

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL SEARCH REPORT  
OR THE DECLARATION

(PCT Rule 44.1)

RECEIVED  
APR 22 1999  
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN  
LOS ANGELESDate of Mailing  
(day/month/year)

19 APR 1999

Applicant's or agent's file reference

42390.P5113

FOR FURTHER ACTION See paragraphs 1 and 4 below

International application No.

PCT/US98/27594

International filing date  
(day/month/year)

22 DECEMBER 1998

Applicant

INTEL CORPORATION

- 1.
- ☒
- The applicant is hereby notified that the international search report has been established and is transmitted herewith.

## Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the international search report; however, for more details, see the notes on the accompanying sheet.

Where? Directly to the International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland  
Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

- 2.
- ☐
- The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

- 3.
- ☐
- With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. Further action(s): The applicant is reminded of the following:

Shortly after 18 months from the priority date, the international application will be published by the International Bureau.

If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in rules 90 bis 1 and 90 bis 3, respectively, before the completion of the technical preparations for international publication.

Within 19 months from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

Within 20 months from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the ISA/US

Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

TEMESGHEN GHEBRETINSAE

Telephone No. (703) 305-4777

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 42390.P5113	FOR FURTHER ACTION	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. PCT/US98/27594	International filing date (day/month/year) 22 DECEMBER 1998	(Earliest) Priority Date (day/month/year) 05 JANUARY 1998
Applicant INTEL CORPORATION		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. ☐ Certain claims were found unsearchable (See Box I).
2. ☐ Unity of invention is lacking (See Box II).
3. ☐ The international application contains disclosure of a nucleotide and/or amino acid sequence listing and the international search was carried out on the basis of the sequence listing
- ☐ filed with the international application.
  - ☐ furnished by the applicant separately from the international application,
    - ☐ but not accompanied by a statement to the effect that it did not include matter going beyond the disclosure in the international application as filed.
  - ☐ transcribed by this Authority.

4. With regard to the title, ☐ the text is approved as submitted by the applicant.  
☒ the text has been established by this Authority to read as follows:

**A METHOD FOR USING ENCODED SPREADING CODES TO ACHIEVE HIGH BIT DENSITIES IN A DIRECT-SEQUENCE**

5. With regard to the abstract,
- ☐ the text is approved as submitted by the applicant.
  - ☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is:

Figure No. 2b

- ☒ as suggested by the applicant.
- ☐ because the applicant failed to suggest a figure.
- ☐ because this figure better characterizes the invention.

☐ None of the figures.

**Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)**

The technical features mentioned in the abstract do not include a reference sign between parentheses (PCT Rule 8.1(d)).

**NEW ABSTRACT**

A method for achieving high bit densities in a direct sequence spread spectrum communication system by using encoded spreading codes. An encoded pseudo noise code (213) is first created. This encoded pseudo noise code (213) is then used to spread an information signal (210) by modulating the information signal (210) with the encoded pseudo noise code (213). The same encoded pseudo noise code (213) is also used to demodulated the signal. The encoded pseudo noise code (213) is created by inverting one bit of a pseudo noise code (211) where the inverted bit corresponds to the value of the information signal.

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US98/27594

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :H04B 1/707

US CL :375/206

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 375/206, 200, 208; 364/717.5, 717

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

APS

search terms: encoded PN code, PN code, direct sequence, orthogonal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4,759,034 A (NAGAZUMI) 19 July 1988, col. 5, lines 4-12.	1-2,8
Y	---	3,5,6
X	US 4,972,480 A (ROSEN) 20 November 1990, col.1, lines 23-43.	1-2,8
Y	---	3,5,6
A	US 5,315,616 A (DeLISLE et al) 24 May 1994, abstract.	1-10



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
*A* document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
*E* earlier document published on or after the international filing date	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	
*O* document referring to an oral disclosure, use, exhibition or other means	
*P* document published prior to the international filing date but later than the priority date claimed	*&* document member of the same patent family

Date of the actual completion of the international search

19 MARCH 1999

Date of mailing of the international search report

19 APR 1999

Name and mailing address of the ISA/US  
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Washington, D.C. 20231

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